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INTEGRATED HYBRID ELECTROCHEMICAL DEVICE

ABSTRACT OF THE DISCLOSURE

An integrated hybrid electrochemical device comprising a nickel-metal hydride battery and an alkaline $\text{H}_2\text{-O}_2$ /air fuel cell together sharing a common alkali metal electrolyte in a housing common to both. In one embodiment, the NiMH battery and alkaline fuel cell electrodes share only the same electrolyte. According to another embodiment, the battery and fuel cell electrodes not only share the same electrolyte, but also share common reactant supply plenums as well. In another embodiment, the battery and fuel cell electrodes share a common electrolyte, common reactant (i.e. H_2 and O_2 or air) supply plenums, and common current collectors.